

ABSTRACT

Disclosed is an apparatus and method for storing and searching computer node addresses in a computer network system. In one embodiment, the apparatus comprises a frame forwarding device such as a switch. The switch includes two MAC address tables including a primary MAC address table and secondary MAC address table both for storing and searching MAC addresses. The primary table stores records that contain compressed values of MAC addresses. The records are contained in storage locations that are referenced using the compressed value of the MAC address as a search index. In order to account for searching collisions that may result from different MAC addresses compressing to the same value, each record in the primary address table is linked to a chain of records in the secondary table. The records in the secondary table store the full value of the MAC address. Each chain of records in the secondary address table contains MAC addresses the present invention.